

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A process for identifying inhibitors of a eukaryotic human potassium channel,

a) providing a mutated *S. cerevisiae* cell which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1 and which is not complemented by an expressed HERG1;

b) treating said mutant with a eukaryotic human potassium channel aside from HERG1 wherein said eukaryotic human potassium channel is expressed heterologously in this mutated *S. cerevisiae* cell;

c) incubating the *S. cerevisiae* cell expressing the eukaryotic human potassium channel together with a substance to be tested; and

d) determining the effect of the substance to be tested on the eukaryotic human potassium channel, wherein a decrease in the transport of potassium across the eukaryotic human potassium channel indicates that the substance is an inhibitor of the eukaryotic human potassium channel.

Claim 2 (previously presented): The process as claimed in claim 1, wherein the genes TRK1, TRK2 and TOK1 are switched off in the mutated *S. cerevisiae* cell ($\Delta trk1$, $\Delta trk2$, $\Delta tok1$).

Claim 3 (cancelled)

Claim 4 (currently amended): The process as claimed in claim 1, wherein the eukaryotic human potassium channel is Kv1.5 or gpiRK1.

Claim 5 (currently amended): The process as claimed in claim 4, wherein the eukaryotic human potassium channel is mutated.

Claim 6 (currently amended): The process as claimed in claim 2, wherein the eukaryotic human potassium channel is present in a yeast expression plasmid.

Claim 7 (previously presented): The process as claimed in claim 2, wherein the mutated *S. cerevisiae* cell expresses constitutively a growth reporter.

Claim 8 (currently amended): The process as claimed in claim 7, wherein the substance to be tested, which has an effect on the ~~eukaryotic~~ human potassium channel, inhibits the growth of the mutated *S. cerevisiae* cell.

Claim 9 (currently amended): The process as claimed in claim 7, wherein the effect of the substance to be tested on the ~~eukaryotic~~ human potassium channel is determined by measuring the cell count of the mutated *S. cerevisiae* cells.

Claim 10 (previously presented): The process as claimed in claim 9, wherein the cell count is determined via the fluorescence or luminescence of the constitutively expressed growth reporter.

Claims 11-19 (cancelled)

Claim 20 (currently amended): A process of identifying activators of a ~~eukaryotic~~ human potassium channel,

a) providing a mutated *S. cerevisiae* cell which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1 and which is not complemented by an expressed HERG1;

b) reacting said mutant with a ~~eukaryotic~~ human potassium channel aside from HERG1 wherein said ~~eukaryotic~~ human potassium channel is expressed heterologously in this mutated *S. cerevisiae* cell;

c) incubating the *S. cerevisiae* cell expressing the ~~eukaryotic~~ human potassium channel together with a substance to be tested; and

d) determining the effect of the substance to be tested on the ~~eukaryotic~~ human potassium channel wherein an increase in the transport of potassium across the ~~eukaryotic~~ human potassium channel indicates that the substance is an activator of the ~~eukaryotic~~ human potassium channel.

Claim 21 (currently amended): A process of identifying activators of a ~~eukaryotic~~ human potassium channel,

a) providing a mutated *S. cerevisiae* cell which does not express the three endogenous potassium channels TRK1, TRK2 and TOK1 and which is not complemented by an expressed HERG1;

b) reacting said mutant with a ~~eukaryotic~~ human potassium channel aside from HERG1 wherein said ~~eukaryotic~~ human potassium channel is expressed heterologously in this mutated *S. cerevisiae* cell;

c) incubating the mutated *S. cerevisiae* cell expressing the ~~eukaryotic~~ human potassium channel together with a substance to be tested in the presence of an inhibitor of the ~~eukaryotic~~ human potassium channel; and

d) determining the effect of the substance to be tested on the ~~eukaryotic~~ human potassium channel wherein an increase in the transport of potassium across the ~~eukaryotic~~ human potassium channel indicates that the substance is an activator of the ~~eukaryotic~~ human potassium channel.

Claims 22-25 (canceled)